ABSTRACT

BACKGROUND AND OBJECTIVES :

Diabetes is a common non communicable, endocrine disorder which is a major culprit of morbidity and mortality of mankind at present. Of all the known complications of Diabetes, Diabetic foot ranks first in decapitating the affected's day today activities. *According to WHO, somewhere in the world, **FOR EVERY 30 SECONDS, A LOWER LIMB IS LOST DUE TO DIABETES** in which the pathetic concern is that nearly 50 % of all these diabetic leg amputations could have been prevented with basic medical care and awareness.* Considering the burden of wound care on health system, this study is undertaken comparing the efficacy of Superoxide against Povidone Iodine in the treatment of Diabetic Foot ulcers in our medical college hospital during the period of January 2012 to September 2013 in a subset population of 100 patients.

METHODS :

All patients with Grade 2 and 3 ulcer foot and Type I and II Diabetes Mellitus patients attending general outpatient department of Govt. Mohan Kumaramangalam Medical College hospital, Salem are taken in to consideration as data source during the period of January 2012 to September 2013. This is an Interventional Randomized comparative study. 50 patients were considered as Group A and these Patients are dressed with the Superoxide solution after routine debridement and cleaning procedure. Their outcome as a result of superoxide dressing is recorded. The superoxide solution acts by the difference in the Osmolarity of the solution and the pathogen's cell wall, resulting in the lysis of the pathogen. Another 50 patients are considered as Group B and these patients are treated with the standard povidone iodine solution for dressing the Diabetic foot ulcer. Povidone iodine acts by means of the bound iodine element which is an antiseptic and disinfectant causing the lysis of infective organisms. Their outcome as account of Povidone Iodine is recorded. A standard grading in view of percentage decrease in wound size, periwound oedema/erythema, discharge of pus and percentage increase in granulation, fibrin and epithelisation was noted in wounds of both groups.

RESULTS :

Out of 100 patients studied, most of the diabetic foot lesions lodged gram negative bacilli. Superoxide treated wounds showed reduction in inflammation and their time to lesion healing earlier than betadine group and the results are tabulated.

INTERPRETATION AND CONCLUSION :

Superoxide framed a superiority over Povidone iodine when comparing the time to lesion healing and disinfection of wound. Superoxide is found to accelerate the wound granulation process against povidone iodine which appeared granulo-toxic. Superoxide application was found to safe, non-irritant and allergic free. Early detection, prompt debridement and wound care with Superoxide along with proper glycaemic management as a holistic approach definitely prevents morbid amputations.

KEY WORDS : Diabetic Foot, Superoxidized water, Povidone iodine.